



Ayush

Roll No.: 2201188ME

B.Tech

Mechatronics And Automation Engineering

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GitHub Profile

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EDUCATION

- Indian Institute Of Information Technology, Bhagalpur** 2022-26
Mechatronics And Automation Engineering CGPA: 8.22(Absolute)
- Happy Model School Varanasi, 12th** 2021
Central Board of Secondary Education Percentage: 93
- Happy Model School Varanasi, 10th** 2019
Central Board of Secondary Education Percentage: 89

TECHNICAL SKILLS AND INTERESTS

Programming Languages: C, C++, Python

Machine Learning: Supervised and Unsupervised Learning

Deep Learning and Neural Networks: ANN, CNN, RNN, LSTM

Generative AI: LLMs, NLP, RAGs, Autonomous Agents

Cloud Services: AWS, Firebase, Google Cloud Platform

Frameworks: ROS(Robot operating system) Langchain, LlamaIndex, Mistral, Langgraph

Tools and Software : TensorFlow, Keras, Jupyter Notebook, Spyder, PowerBI, MS Excel, ANSYS, Solidworks, MSC ADAMS, Origin Labs, Matlab, KiCad, Arduino

Certification : Machine Learning Specialization and Generative AI for Everyone by DeepLearning.AI

PROJECTS

- SpamBERT: A BERT-Based Spam Detection System** [GitHub](#)
 - Fine-tuned a **pre-trained BERT model** for spam email classification, achieving **95% accuracy**.
 - Preprocessed over **10,000 emails**, reducing data noise by **20%** to improve model performance.
 - Utilized evaluation metrics such as **precision, recall, and F1-score**, achieving an **F1-score of 0.93**.
 - Reduced false positives by **15%** through confusion matrix analysis and classification reports.
- OmniAssist: All-in-One AI Assistant** [GitHub](#)
 - **AI assistant** built for tasks like **document summarization, video note generation, news aggregation, and multi-language code generation**, reducing manual workload by **50%** and increasing task execution speed by **20%**.
 - Incorporated **internet access** and **Gmail functionality** for real-time information retrieval and email management, supporting collaboration among **5 agents** for complex tasks.
 - Executed the transition to enhanced **image support** and detailed chat history management, leading to a **30% boost in customer satisfaction** ratings and fostering a more responsive support environment for users.
 - Integrated **LangChain, ChromaDB, and LangChain agents**, enhancing language processing and data management, improving data retrieval accuracy by **25%** and reducing processing time by **40%**.
- Cylindrical Manipulator Pick and Drop Robotic Arm** [GitHub](#)
 - Developed a cylindrical robotic manipulator for precise **pick-and-drop tasks** with ± 0.1 mm accuracy in vertical and horizontal movements.
 - Integrated **adjustable grippers**, handling boxes of various sizes with a maximum **load capacity of 500g**.
 - Implemented **GRBL firmware** to interpret **G-code commands**, achieving **95% movement accuracy**.
 - Established communication between **Arduino and Raspberry Pi**, improving processing speed by **20%** with the Raspberry Pi as the central processor.
 - Incorporated **computer vision** for accurate object identification and automated handling, reducing error rates by **25%**.

POSITIONS OF RESPONSIBILITY

- Training and Placement Coordinator**, Indian Institute Of Information Technology, Bhagalpur 2022-26

ACHIEVEMENTS

- Secured **All India Rank 388** in Amazon ML Challenge 2024 with over 75000+ teams registered.
- **19th rank** in IRO-C-U ISRO Robotics Challenge all over India .
- **Rank of 34th** all over India for Flipkart grid robotics challenges.